REMARKS/ARGUMENTS

Claims 1-54 are pending in the above application.

The Office Action dated July 8, 2009, has been received and carefully reviewed. In that Office Action, claims 1-4, 6-9, 11, 15, 17, 24-29 and 32-36 were rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe, claim 5 was rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe and further in view of Zaumen, and claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe and further in view of Schulter. Claim 12 was rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe and further in view of Cohen, claims 13,14, 30 and 31 were rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe and further in view of Rune, claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe and further in view of Zisapel, and claims 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe and further in view of Yousefi'zadeh. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe and Yousefi'zadeh and further in view of Ebrahim, claims 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Zaumen, and claims 41-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Ebrahim. Claim 46 was rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Ebrahim and further in view of Cohen, claims 47, 50 and 51 were rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Yousefi'zadeh, and claims 48 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Yousefi'zadeh

and further in view of Ebrahim. Claim 52 was rejected under 35 U.S.C. 103(a) as being unpatentable over Ballard in view of Joffe, claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballard in view of Joffe and further in view of Ebrahim, and claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballard in view of Joffe and further in view of Vange. Objections to claims 37-40 were also raised. It is believed that all claims are allowable over the art of record, and reconsideration and allowance of claims 1-54 is respectfully requested in view of the following remarks.

CLAIM OBJECTIONS

Claim 37 was objected to for including an extra occurrence of the word "said" on line 9. This occurrence of the word "said" has been removed as suggested by the examiner.

GENERAL COMMENT REGARDING ALL REJECTIONS

The individual grounds of rejection are addressed below. However, as an initial matter, it is respectfully submitted that none of the rejections under 35 U.S.C. 103(a) presented in the July 8, 2009, Office Action satisfy the requirements of MPEP 706.02(j) and that none of these rejections constitute prima facie showings of obviousness. MPEP 706.02(j) requires that, in order to support a rejection under 35 U.S.C. 103(a), an examiner must explain what limitation of a claim is not satisfied by a primary reference and then identify "the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter…." Each rejection under 35 U.S.C. 103(a) in the above-referenced Office Action indicates that a primary reference fails to satisfy a

certain limitation of a claim and that it would have been obvious to modify the primary reference "with the teachings of" the secondary reference. For example, the rejection of claim 1 indicates that it would have been obvious "to modify the system of Brendel with the teaching of Joffe." No further explanation of the how the primary reference should be modified is provided.

Stating that some unspecified modification to the primary reference should be made does not constitute an explanation as to how the primary reference should be modified to arrive at the claimed subject matter. In the present case, the examiner attempts to modify Brendel's system with teachings from various conventional load balancing systems. However, Brendel specifically provides that his system "...cannot perform traditional load balancing without knowledge of the loads of each server at the server farm, or knowledge of the requests from other clients." Brendel acknowledges this shortcoming of his system and does not propose any way to address it. Asserting that Brendel's system should be modified in some unspecified manner using conventional art does not constitute an explanation as to how to make Brendel's system perform the methods of the pending claims.

It is believed that the foregoing statements alone would constitute a complete response to the outstanding Office Action since a prima facie case of obviousness has not been presented in connection with any claim. However, the individual rejections are addressed below to show how the references teach away from the combinations being suggested by the examiner and/or do not suggest any change to a primary reference that would result in any of the claimed inventions.

REJECTIONS UNDER 35 U.S.C. 103(a)

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe. Claim 1 recites a method of selecting a server to represent a virtual server hosted by a plurality of servers that includes providing, by a load balancer not associated with the virtual server, values, for one or more parameters, of two or more paths. Each path is defined between a point in a vicinity of a client accessing the virtual server and one of the plurality of servers representing the virtual server. The method also includes selecting a server to provide data for the client, responsive to the values of the one or more parameters, and the load balancer is a client-controlled load balancer that directly selects one of the plurality of servers representing the virtual server based on the one or more parameters.

The Office Action acknowledges that Brendel does not teach at least providing by a load balancer values for one or more parameters, of two or more paths, each path defined between a point in a vicinity of a client accessing the virtual server and one of the plurality of servers representing the virtual server. The Office Action indicates that some modification to Brendel should be made based on the teachings of Joffe. However, the modification to Brendel that is being proposed is not identified in the Office Action, MPEP 706.02(j) has not been satisfied, and as discussed above, a prima facie case of obviousness has not been presented in connection with claim 1.

It is also not clear what modification to Brendel could be suggested by Joffe. Joffe discloses a system in which individual servers use ICMP pings to determine ICMP routing times between themselves and a browsing client's machine (column 12, lines 1-4). Thus, Joffe might suggest that servers in Brendel determine routing times to

Brendel's client, but this is not the invention of claim 1. Indeed, Joffe teaches away from modifying client-side devices in any manner at column 2, lines 44-51, where he explains that load balancing involving client machines is undesirable because it requires an effort to make sure all clients are running proper software. If the rejection of claim 1 based on Brendel and Joffe is maintained, it is respectfully requested that the examiner comply with the requirements of MPEP 706.02(j) and identify the modification to Brendel that is being proposed, and provide a reason that one skilled in the art would make such a modification Brendel, especially in view of the fact that Joffe seems to teach away from making any modification to Brendel's client.

Claims 2-23 depend from claim 1 and are submitted to be allowable for at least the same reasons as claim 1.

Claim 24 recites a method of selecting a server to be accessed that includes receiving, by a load balancer, a message relating to a virtual server, hosted by a plurality of servers, and to a client desiring to receive data from the virtual server. The method also includes selecting by the load balancer one of the plurality of servers to provide data to the client based on one or more parameters related to a path to the client. The load balancer is closer to the client than to the selected server, and the load balancer comprises a client-controlled load balancer that directly selects said one of the plurality of servers representing the virtual server based on said one or more parameters. The Office Action acknowledges that Brendel does not teach at least selecting by a load balancer one of a plurality of servers to provide data to a client based on one or more parameters related to a path to the client. However, the Office Action indicates that Joffe addresses this shortcoming of Brendel.

It is respectfully submitted that the rejection of claim 24 does present a prima facie case of obviousness because it does not comply with the requirements of MPEP 706.02(j) as discussed above.

Claims 25-36 depend from claim 24 and are submitted to be allowable for at least the same reasons as claim 24.

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Zaumen. Claim 37 recites a method of selecting a server to be accessed that includes receiving, by a load balancer, a message relating to a virtual server that is hosted by a plurality of servers, and to a client desiring to receive data from the virtual server. The method also includes selecting, by the load balancer, one of the plurality of servers to provide data to the client, at least partially responsive to the cost of communications between the client and one or more of the plurality of servers. The load balancer is a client-controlled load balancer that directly selects said one of the plurality of servers representing the virtual server based on one or more parameters. The Office Action acknowledges that Brendel does not show or suggest selecting by the load balancer one of the plurality of servers to provide data to the client at least partially responsive to the cost of communications between the client and one or more of the plurality of servers. The Office Action indicates that Zaumen addresses this shortcoming of Brendel; however, the modification to Brendel that is being proposed is not identified, MPEP 706.02(j) is not satisfied, and a prima facie case of obviousness is not presented in connection with claim 37.

Furthermore, it does not appear that Zaumen suggests any change to Brendel that would result in the invention of claim 37. Zaumen is directed to determining

desirable routes in a network between first and second identified endpoints and discusses measuring the qualities, including communications costs, of multiple pathways. It is not clear how determining an optimal route between two given nodes of a network suggests a modification to Brendel's system that would produce a method that includes selecting a server using a client-controlled load balancer as recited in claim 37. Claim 37 is submitted to be allowable over Brendel and Zaumen for at least this reason.

Claims 38-40 depend from claim 37 and are submitted to be allowable for at least the same reasons as claim 37.

Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Ebrahim. Claim 41 recites a load balancer that includes, inter alia, an interface adapted to receive server access messages from clients and a processor adapted to determine, for at least one of the messages, whether the message requires load balancing. The determining is responsive to at least one attribute different from the identity of the server referenced by the message. The processor comprises a client-controlled processor that directly selects the server to service the client based on the at least one attribute. The Office Action acknowledges that Brendel does not show at least determining whether a message requires load balancing responsive to at least one attribute different from the identify of the server referenced by the message. However, Ebrahim is cited to address this shortcoming of Brendel. The Office Action does not explain what modification to Brendel is being proposed based on Ebrahim, does not satisfy the requirements of MPEP 706.02(j), and does not present a prima facie case of obviousness in connection with claim 41.

Furthermore, it is not clear what modification to Brendel might be suggested by Ebrahim. Ebrahim teaches a system for context-dependent name resolution. In Ebrahim, the particular one of several destination hosts that is selected is determined in part based on the "caller" of the host (column 4, lines 7-13). This in no manner suggests any change to Brendel that would allow a determination regarding whether a message requires load balancing. Ebrahim does not suggest any change to Brendel that would result in the invention of claim 41, and claim 41 is submitted to be allowable over Brendel for at least this reason.

Claims 42-46 depend from claim 41 and are submitted to be allowable for at least the same reasons as claim 41.

Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Yousefi'zadeh. Claim 47 recites a method of selecting a server to be accessed that includes receiving, by a load balancer, a message relating to a virtual server, hosted by a plurality of servers, and to a client desiring to receive data from the virtual server. The method also includes choosing a function from a plurality of predetermined functions utilized by the load balancer for selecting servers, responsive to the received message, and selecting, by the load balancer, one of the plurality of servers that minimizes or maximizes the chosen function, to provide data to the client. The load balancer comprises a client-controlled load balancer that directly selects said one of the plurality of servers representing the virtual server that minimizes or maximizes the chosen function. The Office Action acknowledges that Brendel does not show or suggest at least choosing a function from a plurality of predetermined functions and selecting by a load balancer one of the plurality of serves that minimizes of

maximizes the chosen function. Yousefi'zadeh is cited to address this deficiency. However, the Office Action does not explain what modification to Brendel is being proposed, does not satisfy the requirements of MPEP 706.02(j), and does not present a prima facie case of obviousness in connection with claim 47.

Furthermore, it is not clear what modification to Brendel could be suggested by Yousefi'zadeh. Yousefi'zadeh discloses a load balancer for a plurality of servers that is associated with the servers in a conventional manner. Yousefi'zadeh thus has information regarding the loads of the servers and can send requests to servers in a variety of ways. However, nothing in Yousefi'zadeh suggests any modification to Brendel that would allow Brendel's system to provide such functionality. The combination of Brendel and Yousefi'zadeh does not show or suggest the invention of claim 47, and claim 47 is submitted to be allowable over these references for at least this reason.

Claims 48-51 depend from claim 47 and are submitted to be allowable for at least the same reasons as claim 47.

Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballard in view of Joffe. Claim 52 recites a method of selecting a server to be accessed by a client via a wide area network (WAN) from among a plurality of servers associated with a domain name. The method includes providing a client-controlled load balancer in a local area network (LAN) connected to the WAN, the LAN including the client, receiving at the load balancer a list of addresses of servers hosting the domain name, selecting by the load balancer one of the addresses of the plurality of servers based on a parameter related to a path between a point in the vicinity of the client and one of the

plurality of servers. The Office Action indicates that Ballard discloses some of the above limitations and that it would have been obvious to modify Ballard based on Joffe to produce the invention of claim 52. However, the Office Action does not identify the modification to Ballard that is being proposed, does not satisfy the requirements of MPEP 706.02(j), and does not present a prima facie case of obviousness in connection with claim 52.

Ballard discloses a system in which a client computer maintains a list of servers and selects one of the servers to use, in a random or round-robin manner, for example (column 6, line 3; column 39-48). However, Ballard does not suggest selecting an address of a server based on a parameter related to a path between a point in the vicinity of the client and one of the servers as recited in claim 52. Joffe teaches away from client-based load balancers as discussed above and provides no suggestion that Ballard should be modified in any manner. Claim 52 is submitted to be allowable over Ballard and Joffe for at least this reason.

Claims 53 and 54 depend from claim 52 and are submitted to be allowable for at least the same reasons as claim 52.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe and further in view of Zaumen. Claim 5 depends from claim 1. Zaumen does not address the shortcomings of Brendel and Joffe discussed above in connection with claim 1. Claim 5 is therefore submitted to be allowable for at least the same reasons as claim 1.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe and further in view of Schulter. Claim 10 depends from claim 1.

Schulter does not address the shortcomings of Brendel and Joffe discussed above in connection with claim 1. Claim 10 is therefore submitted to be allowable for at least the same reasons as claim 1.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe and further in view of Cohen. Claim 12 depends from claim 1. Cohen does not address the shortcomings of Brendel and Joffe discussed above in connection with claim 1. Claim 12 is therefore submitted to be allowable for at least the same reasons as claim 1.

Claims 13, 14, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe and further in view of Rune. Claims 13 and 14 depend from claim 1, and claims 30 and 31 depend from claim 24. Rune does not address the shortcomings of Brendel and Joffe discussed above in connection with claims 1 and 24. Claims 13 and 14 are therefore submitted to be allowable for at least the same reasons as claim 1, and claims 30 and 31 are submitted to be allowable for at least the same reasons as claim 24.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe and further in view of Zisapel. Claim 16 depends from claim 1. Zisapel does not address the shortcomings of Brendel and Joffe discussed above in connection with claim 1. Claim 16 is therefore submitted to be allowable for at least the same reasons as claim 1.

Claims 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe and further in view of Yousefi'zadeh. Claims 18-21 depend from claim 1. Yousefi'zadeh does not address the shortcomings of Brendel and Joffe

discussed above in connection with claim 1. Claims 18-21 are therefore submitted to be allowable for at least the same reasons as claim 1.

Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Joffe and Yousefi'zadeh and further in view of Ebrahim. Claims 22 and 23 depend from claim 19. Ebrahim does not address the shortcomings of Brendel, Joffe and Yousefi'zadeh discussed above in connection with claim 19. Claims 22 and 23 are therefore submitted to be allowable for at least the same reasons as claim 19.

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Ebrahim and further in view of Cohen. Claim 46 depends from claim 41. Cohen does not address the shortcomings of Brendel and Ebrahim discussed above in connection with claim 41. Claim 46 is therefore submitted to be allowable for at least the same reasons as claim 41.

Claims 48 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Yousefi'zadeh and further in view of Ebrahim. Claims 48 and 49 depend from claim 47. Ebrahim does not address the shortcomings of Brendel and Yousefi'zadeh discussed above in connection with claim 47. Claims 48 and 49 are therefore submitted to be allowable for at least the same reasons as claim 47.

Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballard in view of Joffe and further in view of Ebrahim. Claim 53 depends from claim 52. Ebrahim does not address the shortcomings of Ballard and Joffe discussed above in connection with claim 52. Claim 53 is submitted to be allowable for at least the same reasons as claim 52.

Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballard in view of Joffe and further in view of Vange. Claim 54 depends from claim 52. Vange does not address the shortcomings of Ballard and Joffe discussed above in connection with claim 52. Claim 54 is submitted to be allowable for at least the same reasons as claim 52.

CONCLUSION

Each issue raised in the Office Action dated July 8, 2009, has been addressed, and it is believed that claims 1-54 are in condition for allowance. Wherefore, reconsideration and allowance of these claims is earnestly solicited. If the examiner believes that any additional changes would place the application in better condition for allowance, the examiner is invited to contact Scott Wakeman (Reg. No. 37,750) at the telephone number listed below.

Deposit Account Authorization

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 50-3828 and please credit any excess fees to such deposit account.

Respectfully submitted,

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